

Technology & Design

System Design and Manufacture Assessment: Unit A2 2

Coursework Timetable

Candidates are required to design and manufacture a technological product or system. They must identify a problem or need and ensure it provides sufficient scope to meet the assessment criteria.

The product must have an energy source to make it function and include a control system comprising input, process and output.

A portfolio should accompany the practical component with written and graphical information produced on not more than 20 A3 pages. Students can present the portfolio in an electronic format.

This unit draws on the knowledge and skills covered in all units but must reflect the chosen option in A2 Unit 1. It represents approximately 60 hours of work and will be internally assessed and externally moderated.

Section	Content	% of unit/ No. pages	Dates
Identification of problem, need & design specification	Problem/need clearly identified leading to precise brief. A fully detailed design specification allowing development of ideas.	6% 2 pgs	Completed by <i>Wed 21st Sept</i>
Initial ideas, selection of ideas for development	Analyse in detail existing solutions. Produce viable new solutions incorporating a broad range of control systems. Produce viable new product outcomes integrating system and application of function. Detailed evaluation of each idea based on relevant criteria. An appropriate selection of a solution for development..	20% 7 pgs	First 3 pages completed by <i>Fri 21st Oct</i> Section completed <i>Thu 1st Dec.</i>
Development	The control system is highly developed to outcome. Clear evidence of numerical analysis in development. The product is highly developed to integrate system with the user and environment. Clear evidence of ergonomic and aesthetic development. Present a detailed plan of manufacture. Produce at a high level working drawings for manufacture.	20% 6-7 pgs	First 2 pages completed by <i>Thu 15th Dec</i> Section completed <i>Mon 6th Feb</i>
Manufacture	Produce a high quality outcome in a wide range of components and materials. Demonstrate clear competence in a range of production skills and processes. Produce a highly functional product with system. Record in detail modifications made during manufacture.	40% 1pg + make	8 wks workshop. All manufacturing including the folder page should be completed by <i>Tue 14th Mar.</i>
Testing and Evaluation	Produce a high level critical and objective evaluation of the outcome. Carry out and present an extensive range of detailed testing, showing meaningful conclusions. Make high level proposals for further development as an outcome of testing.	14% 3-4 pgs	Completed by <i>Mon 3rd Apr</i> Completed folder final hand in date <i>Monday 10th April.</i>

The coursework pages must be handed in on or before the dates listed above. To overcome the problem of students not handing in work on time, the following rules have been devised:

- a) If a student is aware that they will be absent on the day that coursework is required, they must hand it in on the previous day.
- b) If a student is absent due to unforeseen circumstances, they must hand in the coursework at the earliest opportunity, with a parental note explaining why the coursework was late.
- c) If the teacher requiring the coursework is not available to receive it. The work may be handed in to another member of the technology staff, or left on the teacher's desk with a name to identify the student. If the department is locked, the coursework may be left in the teacher's pigeon hole in the working teachers staffroom.
- d) If a student forgets to hand in coursework on time, one days grace will be given to that student, as long as a parental note is provided with the late coursework. Note. The teacher must be informed if coursework has been forgotten.
- e) If the coursework is not provided on the following day, a telephone call shall be made to the student's parents, requesting a meeting to discuss the student's future in this subject.

The course work provided must also be of a suitable standard for 'A' level. Therefore, to overcome the problem of handing in sub-standard work the following guidelines have been devised:

- a) The coursework, which is handed in, is required to be equivalent of 2/3 or above, the final mark for that element.
- b) At any stage previous to the hand in date, the student may ask the teacher to look over their work to provide further guidance.
- c) If the coursework is not to the required standard, a telephone call shall be made to the student's parents, requesting a meeting to discuss the student's future in this subject.